

US PATENT & TRADEMARK OFFICE



3 0402 00275 1388

PATENT OFFICE

MAR 27 1941

D7



JOSIAH WEDGWOOD, F.R.S.
1730-1795



0.1

THE MAKING OF WEDGWOOD

RETURN TO
DESIGN DIV.

IN ENGLAND

NK
4210
.W4
J69
1925



THE MAKING OF WEDGWOOD

ISSUED BY

JOSIAH WEDGWOOD
AND SONS, LIMITED
ETRURIA
STOKE-ON-TRENT
ENGLAND

MAKERS OF ALPINE PINK AND OTHER
FINE CHINA · FINE EARTHENWARE
JASPER · BLACK BASALT
STONEWARE · CANE
CELADON · LAVENDER
AND KEITH MURRAY WARE

ORIGINAL TRADE MARK IN USE
SINCE 1759, NOW REGISTERED
AND USED ON EARTHENWARE
AND JASPER

WEDGWOOD

REGISTERED TRADE MARK FOR
CHINA



WEDGWOOD

- Short Account of -
Wedgwood's Activities.

A NAME that is honoured the whole world over wherever pottery is mentioned. "The Father of English Pottery," the "Prince of Potters" are terms familiarly used when referring to this most prominent member of the well known Staffordshire family.

He was born in 1730 at Burslem, the Mother town of the Potteries, started work in the factory at nine years of age, was apprenticed at fourteen years. At nineteen he entered into partnership with Harrison & Alders, potters at Stoke—and later the more important partnership with Thomas Whieldon, of Fenton Low.

In 1759, he started as a Master Potter in a factory of his own at Burslem—and moved to larger Works five years later, finally settling at Etruria in extensive Works he had built for himself in 1769. Here by untiring energy and industry he introduced new wares and developed a class of manufacture which was eminently successful in his own day, and has still a premier position at the present time.

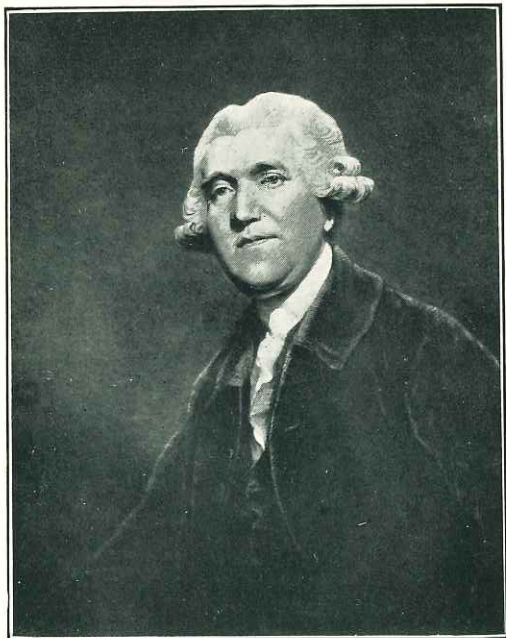
He was elected a member of the Royal Society in 1783.

Wedgwood's whole life was a constant routine of research, he acquired and experimented with any materials that offered a promise of success, whether they were natural clays or minerals for producing his various wares, or tools for improving his processes of manufacture ; or in the equally essential direction of seeking out and utilizing the services of the best artists and craftsmen of the day.

By gradual and sure steps he rose to the pinnacle of fame in the Ceramic World where his name still rests to-day.

He died on the 3rd of January, 1795, and was buried in

WEDGWOOD'S ACTIVITIES



JOSIAH WEDGWOOD, F.R.S.

*From a painting by
Sir Joshua Reynolds, P.R.A.*

the old Church of Stoke-on-Trent. In the Chancel is a monument to his memory by John Flaxman, R.A., with an inscription which includes this sentence :—

"Who converted a rude and inconsiderable manufacture into an elegant Art and an important part of National Commerce."

THE PORTLAND VASE

THIS beautiful monument of ancient art was discovered near Rome, between the years 1623-1644. A mound of earth called Monte del Grano, about three miles from the City, during cultivation, was found to have a large vault under it, which was a sepulchral chamber enclosing a sarcophagus within which was this vase, full of ashes. There was no inscription to give any light with respect to whose remains were deposited there.



The sarcophagus was placed in the Museum of the Capitol, the vase in the library of the Barberini Family. For over a century it was known as the Barberini Vase.

THE PORTLAND VASE

At the dispersion of this library, the vase was purchased by Sir William Hamilton, who sold it to the Duchess of Portland. When her Grace's very valuable museum was sold the vase was purchased by the Duke of Portland for £1,029.

The zeal of its noble proprietor to promote the interests of the Fine Arts, enabled Wedgwood to indulge to the utmost his wishes in attempting to produce copies of it, and the Vase was entrusted to him for upwards of twelve months.

In 1790, four years afterwards, Wedgwood is able to say :—"A copy being now executed, I rely upon the candour of the public in judging how far I may have succeeded in this arduous, by some deemed even presumptuous, undertaking,"—"this vase after a strict comparison with the original, has given perfect satisfaction to the most distinguished artists and amateurs in Britain. I have thought it necessary to have the accuracy of the copy authenticated in the fullest manner ; and have been honoured with testimonials for that purpose, by the noble possessor of the vase itself, his Grace the Duke of Portland, by Sir Joseph Banks, Bart., President of the Royal Society, by the Earl of Leicester, President of the Society of Antiquaries, and by Sir Joshua Reynolds, President of the Royal Academy of Arts. The latter is pleased to say that he can venture to declare it a correct and faithful imitation, both in regard to the general effect, and most minute details of the parts."



Figure under the base of the Portland Vase

A WEDGWOOD HANDBOOK

A Selection of Wedgwood Trade Marks is given below to assist any who are desirous of verifying any marks in their possession :—

wedgwood

Probably the first mark, and supposed to have been used by Wedgwood at Burslem.

WEDGWOOD
Wedgwood

Used in varying sizes up to 1768-9.



The circular stamp, without the inner and outer rings, and without the word Etruria, is doubtless the earliest form of the Wedgwood and Bentley stamp.



This mark, with the word Etruria, is made upon a wafer, fixed inside the plinth of old basalt vases with reversible covers for candelabra, and on some large specimens.



The well-known circular stamp, with an inner and outer line, always placed round the screw of the basalt, granite, and Etruscan vases, but is never found upon the jasper vases of any period.

WEDGWOOD
& BENTLEY

WEDGWOOD
& BENTLEY

Wedgwood
& Bentley

In varying sizes, used upon busts, vases, figures, plaques, medallions and cameos.

TRADE MARKS



This rare mark is found only upon chocolate and white seal intaglios.

Wedgwood
Wedgwood
WEDGWOOD
WEDGWOOD

Marks, varying in size, attributed to the period after Bentley's death, and probably used for a time after Wedgwood died.

WEDGWOOD
ETRURIA
WEDGWOOD
ETRURIA
Wedgwood
Etruria

These marks rarely found upon pieces of a very high character. Adopted about 1840, but soon disused.

WEDGWOOD
WEDGWOOD

These marks, varying in size, are still used at Etruria for the modern jasper and useful ware of all varieties.



WEDGWOOD

Mark now in use for china; was adopted in 1879. The word England was added in 1891.

The Wedgwood and Bentley mark is found only upon basalt and crystalline agate or imitation stone vases, upon plaques, medallions and portraits of the same period. It is never found upon the blue and white jasper vases, nor upon any example of green, pink, lilac, or cane color.

The mark WEDGWOOD being used now exactly as in the eighteenth century, Wedgwood marks cannot be relied upon as exact evidence of any period of manufacture, excepting the various Wedgwood and Bentley stamps, which were in use only from 1768 to 1780.

Ware marked "Wedgwood & Co.," or "Wedgwood & Co., Ltd." is **not** genuine Wedgwood ware—that is to say, not ware made by the firm established in 1759 by Josiah Wedgwood, F.R.S., and now carried on by his direct descendants.

HISTORICAL NOTES

CONNECTED WITH THE POTTERY INDUSTRY

IN its widest sense pottery embraces all earthenware fabrics, vessels, building materials, implements, personal ornaments, anything fashioned out of plastic clay and hardened by firing.

Pottery was known to prehistoric man, and probably had its origin in many isolated parts at the same period.

The primitive practice of closely plaiting reeds or twigs into basketware and caulking it inside and out with clay, suggests that accidental contact with hearth-fires may have brought about the discovery that firing clay made it watertight and suitable for making vessels.

In early times the women of the homestead were the sole makers and users of the hand-made pottery, and in process of time the forms became more specialised and varied according to their use for storing food or beverage, household or toilet articles, for cooking or serving food, and, still later for interring either the corpse or its ashes.

The making of vessels on rounded pebbles enabled the potters to turn their work towards them—this probably culminated in the potter's wheel—perhaps in early dynastic Egypt, where also the open hearth was replaced by the closed oven or kiln.

At first the simplest methods of decoration were used; incised lines, finger marks, and smears of coloured earth. The rough surface of the clay encouraged the use of slip (thin fluid clay applied before firing). In later ages these processes were developed and supplemented.

To-day the primitive methods remain in remote regions in tribes where the textile and basket work, as well as the pottery making, form part of women's work.

The Greeks held the potter's art in high esteem, their skill was great and vases of good form and workmanship date from 900 B.C. being made of well prepared, fine-quality clay.

HISTORICAL NOTES

Their fine vase period extended over 400 years from the 7th to the 3rd centuries B.C.

A Celtic civilization immediately preceded the introduction of Roman arts into Britain, and urns rudely shaped, but made upon the potter's wheel, suggest that Roman influence had already made itself felt. Roman period ware divides itself into several classes: Samian, Grey, and Upchurch, beside the coarse native pottery made where suitable clay was found.

Great Britain's artistic light came from without. From the East enamelled earthenware was introduced into Europe, through such intercourse as that between the Moors and Spain. Moorish potters established themselves in Malaga and Valencia, the tiles in the palace at Seville, and the famous Alhambra Vase, show their skill. By them was founded the school of ornament now known as Hispano Moresque.

The expulsion of the Moors from Spain in the 15th Century caused the manufacture to cease, but the Art had already spread to Majorca and Sicily, the way being thus prepared for the great works of the Italian Renaissance. The Italians, ever ready to seize and develop an artistic idea, soon improved upon the work of the Majorcan potters.

Gubbio, Faenza (from which comes the name faience) Siena, Urbino, Pesaro and Castel Durante, were among the cities that became famous for ceramic productions.

Among the great masters of the art were Lucca della Robbia, Giorgio Andreoli and Francesco Xante.

Decline came in the 17th Century, but the influence was felt and left its impression.

Delft in Holland made a ware regarded as a compromise between Italian Majolica and Chinese porcelain. The methods of making taken from the former, and designs from the latter.

Lambeth (London) made pottery at a very early date, and in 1676, a Dutch potter settled there and took out letters patent for the manufacture of earthenware "after the way practised in Holland."

A WEDGWOOD HANDBOOK

Probably a piece of Italian Majolica *inspired* Bernard Palissy with the desire to become a potter. This was in 1542, and for 15 years he struggled and suffered, to see his efforts at last successful.

From Italy the artists and artisans migrated to France, lured by the offers of support from the French nobles. Several factories were established for enamelled faience. The likeness between late Italian and early French being very marked.

At Nevers, pottery was made at the end of the 16th Century, and Rouen started a factory about 1644.

Wars and famine of 1712 so depleted the royal treasury that Louis XIV. sent all his gold plate to the mint, and commanded the Rouen potters to furnish the royal tables with ware. This caused a sudden demand, and no trouble was spared to make their work fit for a King.

Moustiers, a minor, but nevertheless important, factory was established in 1700 and carried on the style of Rouen with a treatment more simple and having an original note, in that a variety of colours were used instead of blue alone.

Faience was developed in Germany in an entirely different direction. This was the land of the stove, and here is a happy instance of the homely use of faience; no other material could be used with equal satisfaction and effect.

The early English potters of the 16th and 17th centuries devoted themselves to the production of ware of a homely character. Painting on a dark clay with one of a lighter tone occurred to the Romans, but it was left to the Staffordshire potters, to re-discover it. They confined themselves almost entirely to decoration of this sort on porringers, bowls, and "tygs" or many-handled loving cups. Wrotham, in Kent, was an important centre for this class of slip decorated ware.

Staffordshire received a great impetus when two Dutch brothers (Elers), settled there and began to make a fine red ware. Their methods and processes became known, and accident at this time discovered the peculiar properties of flint, calcined and ground to powder, when combined with

HISTORICAL NOTES

the earthenware body, which produced a superior article—so that an enormous advance was made upon the slip wares.

Josiah Wedgwood is, perhaps the best known English potter, and justly so, for he did more to raise the quality of English ware than any other maker.

Deriving his artistic inspiration from the Antique, he produced beautiful shapes, improved existing materials, and by persistent and energetic research discovered and introduced new mixtures and processes which rapidly benefitted the whole industry. He worked from 1744 to 1795 and was the most versatile of potters.

Side by side with the growth of earthenware was the pottery called stoneware, so named from its excessive hardness. It came to England from the Low Countries and Germany, where it was largely made in the 16th century and is generally known under the title *Grès de Flandres* or *Cologne Ware*. It was made at Fulham (London), by John Dwight, first in 1611. Mortlake, near London on the Thames, followed on the same lines in 1752. This class of ware was improved and became the chief product of the Doulton pottery founded in Lambeth (London), in 1815.

As earthenware developed in the West, so porcelain more especially occupied the Oriental potters.

The Chinese must have the credit of being the real inventors of porcelain. Various dates are assigned—it is, however, certain that during the Ming dynasty, 1368-1644, they produced wonderful *sang de boeuf* and *peach-bloom* effects.

Early specimens of porcelain treated with simple cobalt-blue designs were exported to every civilised country, and in Europe this resulted in the manufacture of porcelain by many potters.

Japan followed on the lines laid down by the Chinese, but they proved themselves by far the most progressive of Orientals, as they coupled with their native taste and manual dexterity, a ready acceptance of Western ideas, the outcome being a great advance in earthenware and stoneware also.

A WEDGWOOD HANDBOOK

France preceded Germany in the production of porcelain, but before the discovery of the true clay, it was artificially composed, the first soft paste being made at St. Cloud about 1698. In 1740, a factory was established at Vincennes, which was shortly after removed to Sèvres. Soft paste only was made up to 1768, when the true clay was discovered.

True porcelain, made as the Chinese wares, was a distinction long left to Dresden.

The year when porcelain was first made in England is not known but Chelsea wares (China) stand first in point of time, the earliest known pieces being dated 1745. The paste was artificial and harder than Sèvres.

London made true porcelain at Bow, and Bristol and Plymouth both had porcelain factories.

Derby also made China and under the proprietorship of Duesbury, great progress was made, who also purchased the Chelsea Works and produced china known as Chelsea-Derby, or Chelsea models made in Derby paste.

Worcester made porcelain (China) in the 18th Century. John Wall, in 1751, discovered the secret. Many fellow citizens approached him with a view of purchasing his invention. The result was the forming of the Worcester Porcelain Co. In 1755, William Cookworthy discovered the true kaolin or china clay in Cornwall, which was quickly and extensively used. Cookworthy started the factory at Plymouth, in 1768, which after three years was transferred to Bristol. Plymouth paste was a true hard porcelain, and Bristol "body" is the hardest known, harder even than the ideal Chinese ware. The Bristol Works were closed in 1781.

The origin of Indian pottery is obscure, but almost every village had its potter's field and craftsmen, the variety of work being very great, though the style similar.

Persian pottery has a rough sandy "body," coated with a siliceous enamel, semi-opaque; beautiful specimens date from the 15th Century.

Damascus has given name to a large section of enamel wares, whether they emanated from that city or not. This

HISTORICAL NOTES

ware was largely imported into Europe and, no doubt, kindled the spark of emulation which gave Italy the glorious works of Gubbio and Faenza.

Rhodes, and the neighbouring islands, and also the Arabs or Saracens produced ware with bold designs and beautiful colouring during the 16th Century.

During the whole of the 19th Century pottery manufacture has increased by leaps and bounds in every country. The introduction of machinery has added tremendously to the output, and processes too numerous to mention were invented ; but on the whole, it may be said that they all centred around and enlarged those of the 18th Century.

Sèvres and Dresden have carried on to the present day, and so also have Wedgwood and Worcester factories. The Old Derby Works ceased and a new factory took its place, and such well known names as Spode, afterwards and still Copeland's, Minton, and Doulton, which were started later still exist.



Dice Pattern Cream Jug in Jasper Ware

GENERAL INFORMATION

THE GROWTH OF THE INDUSTRY IN STAFFORDSHIRE.

AS the purpose of this booklet is to interest the ordinary retail purchaser of Staffordshire pottery, it will be advisable to briefly trace the growth of the manufacture, which has, when the conditions of the district are considered, been a steady and almost a rapid one since the 18th Century.

North Staffordshire about the middle of the 17th Century (1650), produced only the rough "butter pots" made from the clay as taken from the earth and formed roughly upon the "thrower's" wheel in varying sizes to convey to market and sell—butter—in effect a measure. Fraud soon crept in, some potters making pots for the farmers thicker, but to look the same size and hold less, this, no doubt, caused the custom to change, and butter was soon sold by weight.

From this rough pot we have grown to what we are to-day.

Of course, the desire to decorate this rough pot soon showed itself, and the potters who were an uneducated folk, having no books, and being unable to read them if they had, let their native feeling express itself upon such pots as they had. Some man obtained some lighter coloured clay and in the form of a liquid about the consistency of cream made dots and lines with it upon the darker clay. Another ingeniously drew these lines together while still soft with a toothed tool, like a comb, and so produced a marbled effect. This was at a later period (1760), developed in the highest form by Wedgwood.

The greatest potter of this early period was Thomas Toft ; he was a man of originality, and elaborated the slip work, combed work, and relief work, in perhaps a crude way, but his sense of design and composition was remarkably good. He glazed his ware by dusting powdered lead ore on it, which, when fired, gave a rich soft yellow glaze. This was the first form of glaze known in Staffordshire.

GENERAL INFORMATION

At this time a Dutch potter, named Elers, arrived in England, with the Prince of Orange. He had knowledge and training and must have practised the craft in the Low Countries or Germany, for he quickly made from the native clay here a much better "body." In 1690, he introduced a red ware with a beautiful surface decorated with little ornaments stamped with a mould and applied separately. Here was true craftsmanship and artistic feeling. This ware was well finished, silky to the touch, the spouts, handles, and lids were from a technical point of view good. The ware was vitreous with no glazing.

Elers' secrets and methods leaked out, with result that the local potters evolved a fresh type of design—a flower, a leaf being stuck on at intervals and a small pipe of clay was placed on by hand to connect them into a scroll, giving freedom in working and continuous design. This process has remained from that day to this.

A new method of glazing with salt in the fire was discovered about the middle of the 17th Century, and this influenced the type of ware. The potter wishing to make something whiter and more like the Chinese porcelain that was finding its way into this country, covered his local clay pot with a coating of white "slip" of Dorset clay, which had been introduced into Staffordshire. In firing he went to a great heat, salt being thrown into the oven at the maximum degree—when it volatilised and a chemical action took place between it and the silica in the clay, causing a very thin coat of glass upon the surface of the pot.

The next development was in the nature of cheapening decorated pieces. Instead of the ornament being applied separately by hand, they began to model shapes with the ornament already on, and mould them, thus making the article by pressing slabs of clay in the mould, which when dry enough, were taken out fully decorated.

Another process of decoration was to take a soft or partially dried clay piece and scratch a pattern on with a pointed tool, and when dry, to rub cobalt into the lines. This, when fired, developed the blue colour, which did not follow the scratched line evenly, but collected in it, so that the whole surface was tinged very delicately.

A WEDGWOOD HANDBOOK

Painting with colour followed, at first only in blue, but a palette of colours was soon discovered and used.

By this time the local clay was discarded, and the imported whiter clays came into use. This enabled the potter to reach his great ideal and make ware almost as white as the Chinese porcelain.

Salt glaze continued from 1690 to 1740, and later with the advent of colour painting, came the desire to make pieces coloured in themselves. Upon the surface metallic oxides were used giving the semblance of tortoiseshell—manganese to give bronze and purples, copper to give green, etc., these were simply dusted on. It was a simple chemical development—but the result was extremely pleasing.

New wares were being introduced, a cream coloured ware, the forerunner of Wedgwood's Queen's ware. Egyptian black ware, and the mixing of clays of different colours to form a marbled clay out of which the pot could be made, so that the colour was all through the mass, some very beautiful effects (mainly accidents) were thus obtained.

The *Whieldon-Wedgwood* period was responsible for the perfecting of these types of decoration. The ware produced had a wonderful glaze and was always distinguished by a delightful sharpness of detail.

At the close of the partnership, Wedgwood having by experiment made useful discoveries, including the beautiful green glaze so much admired, decided to venture out as a master potter, and in 1759, started in a factory of his own at Burslem. He was an ardent student, as well as a capable potter, and he definitely set himself to improve the technique of the industry all round, nothing short of perfection would satisfy him—line and form, coupled with utility, came first in his estimation. He maintained that a useful piece of ware should be ornamental, and equally that an ornamental piece should be of some use.

Look at the work of all the factories, North Staffordshire, Bow, Chelsea, Derby, Worcester, and the deduction is:—Josiah Wedgwood was the one, who keenly interested, studied the beautiful and perfect Greek form and obtained the best results.

GENERAL INFORMATION

All the potters were quick to follow the lead given and seize upon the importance of it, so that all pottery from this time onward is marked distinctly by the influence of Greek line and form. Wedgwood also realised that the decorations on Greek vases were not haphazard arrangements, he, therefore, made his figures and subjects represent something definite.

We are sometimes told that the potter is only a craftsman, but in the beautiful things of the potter's craft there is that which shows the artist. It is craftsmanship to apply decoration but it is Art to know where to apply it.

Printed patterns appeared upon pottery at this time. We are told that the process of transferring patterns from copper plates to pieces of ware, was invented by Sadler, of Liverpool, as early as 1745. Much ware was sent to Liverpool to be printed, as the process was kept more or less a secret.

The early printed patterns were all of Oriental feeling—"Exotic Birds" they were generally called. These had some resemblance to the legendary bird, the "Phoenix." The Emperors of China had dragons as their emblems, the Empresses the "Phoenix."

These exotic birds were the English idea of the Phoenix. It might be a quail, or a pheasant, or a peacock, but the bird is seen on all early English China.

Staffordshire made its first try at true porcelain in about 1750—William Littler, a potter of Longton Hall, inventing a hard paste. It was bad, but still, it was his invention, and it was porcelain. This venture only lasted about ten or eleven years.

Nearly every collection has some piece of Longton Hall porcelain, and if it were all genuine, it would mean that William Littler must have had large factories, and have been potting for about a hundred years.

The manufacture of China in the Staffordshire Potteries was started seriously at the end of the eighteenth century—first Spode, then Minton, and others followed.

The "body" was china, not true porcelain, and the decorations were at first invariably imitations of Oriental patterns.

A WEDGWOOD HANDBOOK

For some reason unknown, Staffordshire China has always been a medium for producing reproductions of other factories, designs, and patterns, no originality seems to have been attempted until the present century—when a distinct movement appears all round and individuality is beginning to assert itself.

The nineteenth century developed what the eighteenth century had discovered, factories multiplied, machine processes superseded to a great extent the hand work; chemical knowledge and research work increased and was encouraged, so that in every branch improvements have made the wares of this centre of pottery manufacture to stand foremost the world over to-day.

GLOSSARY OF TERMS USED

- Pottery** Covers all wares of whatever type or class, and not only, as some prefer to make it, the lower grades of bricks, tiles, garden ware and kitchen crocks.
- Earthenware** All ware may be termed Earthenware which is porous in the "biscuit" state and requires to be glazed before it can be applied to domestic use, Earthenware is opaque.
- Porcelain** Is vitreous (non-porous), and is distinguished from earthenware by being translucent (semi-transparent). True Porcelain is made from a mixture of two minerals—China Clay and China Stone, such ware as Chinese Dresden, Plymouth and Bristol.
- Glassy Porcelain contains the above with the addition of materials to form a glass when fired, and to give the "paste" more translucency—such as Chelsea, Bow, Nantgarw, etc.

GLOSSARY OF TERMS USED

- China** is made from China Stone and China Clay, with a large percentage of Bone Ash added—which gives the beautiful whiteness and translucency so much admired. This is the true English China.
- Cream Ware** (Queensware), a light coloured English Earthenware made first about 1750—it varies in character, colour and quality. That of later date, when broken shows a pure white "body"—a puzzling fact to beginners.
- Stone Ware** a hard vitreous "body" fired at a high temperature and glazed when at full heat by throwing common salt into the oven—the vapour which results is deposited as a fine glaze on the ware. It is practically a non-translucent porcelain.
- or Salt Glaze Ware**
- Delft Ware** A general term applied to earthenware covered with an opaque tin enamelled surface. It takes its name originally from Delft in Holland, where it was largely made—about 1600—but afterwards it was imitated at Lambeth, Bristol and Liverpool.
- Agate Ware, Onyx Ware, Marbled Ware, &c.** All earthenware made to imitate these various natural materials—by mixing colored clays and glazing with a soft rich glaze.
- Jasper Ware** A hard vitreous porcelain type of body, having when thin a translucence, and a fine non-porous surface without the application of glaze.
- Body, Paste, Clay** The names given to the materials of which the ware is made—irrespective of the nature or color applied afterwards. "Paste" is used almost exclusively when referring to porcelain or china.
- China Clay or Kaolin** The whitest clay known—found in England in Devon and Cornwall. It is Granite Rock which has undergone disintegration or de-

A WEDGWOOD HANDBOOK

composition from natural causes during centuries.

- China Stone** Known also as Cornish Stone. The same as China Clay but at an earlier stage. If fired at a high temperature it becomes a hard opaque glass.
- Biscuit or Bisque** Applied to ware when it has been fired once. In earthenware it is porous—in porcelain and china vitreous.
- Glaze** The glassy coating which is applied to the "biscuit" ware.
- Lead Glaze** The earliest form used in England was known as "Galena glaze" being powdered lead ore dusted on to the ware before firing. Later it was made into a liquid form and the ware was dipped into it.
- Leadless Glaze** Materials which form a glass in the oven but lead is eliminated.
- Salt Glaze** (See above).
- Overglaze** This term applies to painted or printed decoration placed upon the ware after the glaze has been fired.
- Underglaze** This applies to decoration, painted or printed, which is done upon the "biscuit" before the glaze is applied, so that when fired the decoration is under the glaze.
- Slip** is a term applied to clay or glaze in the form of slop—a liquid like cream into which ware can be dipped, or which can be poured into a mould (see casting).
- Majolica** Name given to an earthenware which has a soft richly coloured glaze upon it—it takes its name from Majorca.
- Faience** An earthenware having a soft rich glaze and generally decorated with painting under the glaze. From the place of its origin, Fayence.

PROCESSES OF POTTERY MAKING

PROCESSES OF POTTERY
MAKING

LET us take a little tour round the Works in Staffordshire, generally known as the "Pot Bank."

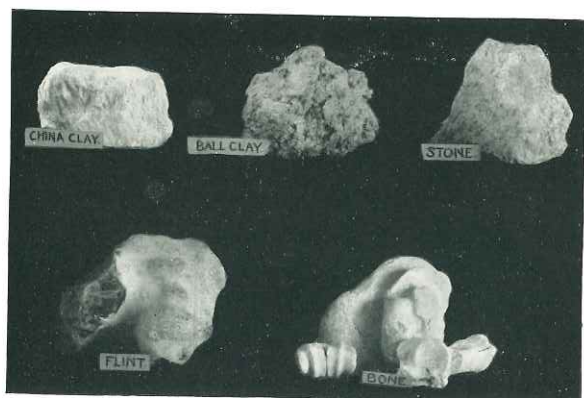


The "Marl Bank"

First we visit the "Marl Bank," (marl being the name for the local clay), and here is collected all the raw materials for making the "body" or clay out of which the pots are made. There are many materials and much variety and quality, but chiefly four materials combine to make the ordinary "bodies" used in Earthenware and China—(a) China Clay from Cornwall; (b) China Stone or Cornish Stone from Cornwall; (c) Flint from France; (d) Ball Clay from Dorset; a fifth material used only in English China is Bone Ash, but this does not require weathering as the other materials on the Marl Bank exposed to all the influences of the atmosphere.

Mainly and roughly—(a), (b), (c) and (d) make the "body" for earthenware—and (a), (b) with the addition of 50 per cent. of bone ash make a China "body."

A WEDGWOOD HANDBOOK



Raw Materials for "body" making

- All these materials have to be prepared and ground.
- (a) Ground and washed to remove dirt.
 - (b) " " " " "
 - (c) The Flint stone as found on the sea shore—the best for the Potters' use comes from the North of France—is very hard and black inside when broken, it has to be calcined in a kiln—this renders it white throughout and though still hard it is easily crushed and ground—when it becomes a fine white powder.
 - (d) Ground and washed.

Bone Ash. This is prepared from Ox bones which are calcined and become brittle and easily crushed and ground into powder.

Each material is mixed with water into a "slip" or slop state about the consistency of thick cream in a pan or vat called a "blunger" which has a revolving shaft provided with arms, which thoroughly mix and keep in motion the mass of "slip."

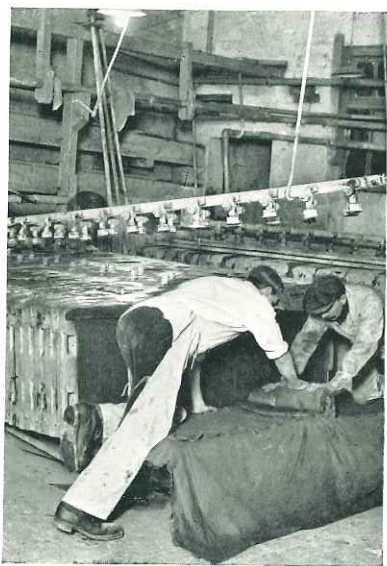
From this vat the slips are run into large tanks called "arks," the required quantity of each being weighed or measured out carefully. Here the mixture is still kept in constant motion and pumped out to pass through a channel over magnets, which extract any particles of iron that may

PROCESSES OF POTTERY MAKING



The "Blunger"

have been freed from the materials during the grinding process. (Small particles of iron would cause brown stains or specks in the finished article, during the firing in the oven,



The "Clay Press"

A WEDGWOOD HANDBOOK

often many times larger than themselves). After passing the magnets the "slip" is pumped into the "Clay press." The Clay press is a series of wooden trays each having a cloth bag with a nozzle at the top, these trays are bolted and screwed together and the nozzle of each bag is connected with a pipe from the tank into which the magneted slip has been run, when the pump is set in motion the slip is forced through the pipe into each of the bags in the clay press, the pressure is continued until the bags are full and the greater proportion of the water is squeezed out of the slip, running away through channels provided for it, the solid portions of the "slip" which have been held in suspension in the liquid are left as stiff clay in the bags. The press is now opened, the bags unfolded and the clay taken out as a thick sheet which is rolled up like a mat, and is ready to undergo a further kneading, in what is called the "pug mill"—this is a cylinder,



The "Pug Mill"

either upright or horizontal, supplied with knives upon the slant, (just like a domestic mincing machine on a large scale), which cuts up and forces the clay through a smaller aperture at the other end where it emerges as a huge square sausage—of very even texture—and is cut off in suitable lengths with a wire (as a cheesemonger cuts cheese) ready for the potters' bench.

PROCESSES OF POTTERY MAKING

The various methods of making pottery are :—

Throwing, Jollying, Pressing, Casting, and the finishing processes are :— Turning, Handling and Spouting. Figuring.	}	All Plastic or Clay Processes.
--	---	---

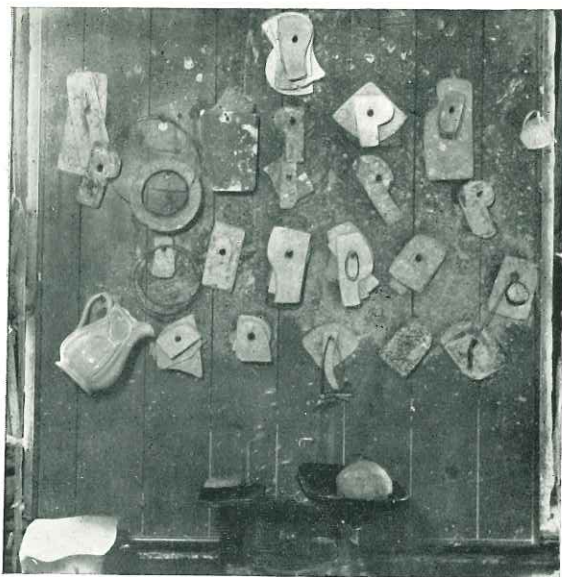
Let us visit the "THROWER" first. This is the most ancient of all the Potters' machines, and is true art craftsmanship. The "Thrower" takes a ball of soft clay and "throws" it down upon his "wheel." (1) a revolving disc or horizontal table, and with superb dexterity manipulates the plastic material that yields to the wish of his hand and eye—he raises the lump into a cone, then presses it down again, and continues this motion until he is quite satisfied that the clay under his hands is of quite even consistency—the ball is now trued or centred on the wheel (2)—he opens it out by pressing his thumb into the middle (3) and pulls the clay up into a cylindrical form, then, putting one hand inside and the other outside (4), he draws up and feels the shape which he is about to make, carrying with it at the top, enough clay to finish the form (5).



4
The "Thrower"

A WEDGWOOD HANDBOOK

It is a revelation to those who see it for the first time—and is really the nearest approach to creation that is humanly possible. He uses profiles made of wood, slate or iron—to smooth both the inside and the outside of his work, and when complete, the piece is cut off the wheel by means of a wire and set aside to stiffen and dry partially, ready for the finishing (when required) of the "Turner."



Profiles used by the Thrower

The "TURNER" works at a horizontal lathe exactly similar to that used in turning wood or metal—and receives the clay piece from the "thrower" after it has become stiff or what is technically called "greenhard" (that is, about the consistency of hard cheese). He puts the piece on his lathe into a "chum" (a) a hollow drum which holds it about the middle) while he shaves or turns the bottom half to the correct outline adding what beads, fillets, or other small units the shape requires, afterwards burnishing the surface with a bright steel tool—he then reverses the piece and finishes the top half.

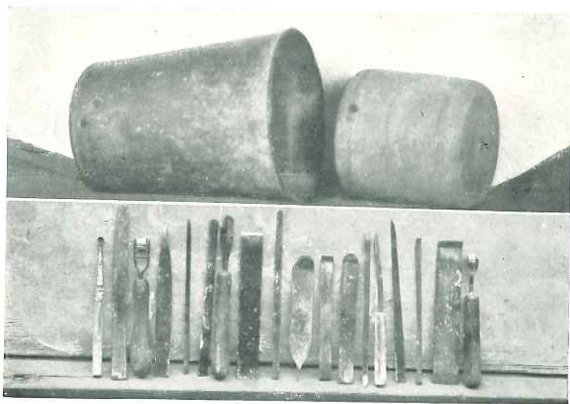
PROCESSES OF POTTERY MAKING



The "Turner"

Some pieces which are open mouthed he puts on a solid "chock" (*b*) and finishes the whole of the surface outside at the one operation.

When pieces have a coating of slip of a different color, over the whole or in parts—the turner will dip the shape into



The "Chock" and "Chum" and Turner's Tools

the slip, allow it to partially dry, then place it on his lathe, finishing it and burnishing it ready for drying or further decoration in clay, as is necessary.

A WEDGWOOD HANDBOOK



Dipping a Vase in "Slip"

Bead runners and many leaf border ornaments are put on clay pieces by the turner with the aid of a little wheel runner engraved with the pattern in the reverse, which he presses against the clay as the piece is revolving on his lathe.



Applying a "Runner Band"

PROCESSES OF POTTERY MAKING

Figuring or Ornamenting. Clay decorating is done when the piece of ware is still "greenhard," and after it has left the Turner; Figures, Leaves, Scrolls, Bands, and relief ornaments are made in clay (generally of a different color to the ware itself) in a mould—lifted out and applied while soft, upon the piece of ware—water and careful delicate



Making Figure Reliefs

pressure being all that is necessary to make the two adhere firmly, if all the air has been driven out from between the two clay surfaces.



Ornamenting in Clay

A WEDGWOOD HANDBOOK

Handling and Spouting. Handles are sometimes made from strips of soft clay, squeezed through a die to give them



Squeezing the soft clay
through the die

Bending the soft clay into
the handle shape

The Hand-made Handle



The Handler

the required section, cut into lengths and bent by hand while soft to the right shape—these are allowed to stiffen, then trimmed and “fettled,” (finished), and stuck on to the teapot, cup or jug. Sometimes they are pressed by placing soft clay in a Plaster of Paris mould—allowed to stiffen, fettled, and applied.

PROCESSES OF POTTERY MAKING



Handle and Spout Moulds

Spouts and Lips to jugs are made in the same way by the use of moulds.



The Modeller—A Bust

A WEDGWOOD HANDBOOK

Modelling. A very important man on any works is the modeller—he is responsible for making the models and patterns of Figures, Shapes, Handles, and Spouts. These models are made by him in clay, and finished exactly as they are to appear in detail and surface when the article is complete from the oven. According to the class of ware and the hardness, so will vary the contraction, or shrinkage during firing; therefore, the modeller has to allow for this in his model, and all his work in the clay has to be larger than the finished article—sometimes as much as one fifth bigger. These models are often cut into many pieces to facilitate the making of the piece of ware afterwards by the potter.



The Modeller—A Soup Tureen

Figures are often made in a good many pieces—the head, torso and limbs being separately made pieces—with such additional portions as, the tree trunk, the base, and the lyre, in the figure of Apollo shewn. These are all finished separately and stuck together in clay. When dry, the statue is propped to keep it from falling out of shape in firing, and placed in the oven. The smaller figure shows the contraction which has taken place during ustulation.

PROCESSES OF POTTERY MAKING



The Moulds for the Apollo Figure



Parts of a Figure, before assembling together. The clay figure propped for firing. The fired figure--showing contraction

A WEDGWOOD HANDBOOK

Mouldmaking. The mouldmaker is the workman who makes moulds from the modeller's patterns, and produces in quantity sets of replica moulds, "working moulds" as they are called, for the potter's use. Moulds are made from Plaster of Paris.



The Mould-Maker

To take a simple illustration—a cup and saucer. The modeller makes first the shape of the cup, and if it has any slight embossed ornament on it he models it upon the shape by hand—he also adds the handle, and sometimes an elaborate foot. The saucer shape (upper side) is made in the same way.

Then the mouldmaker takes the cup shape, from which the modeller has detached the handle, and surrounds it with a wall, or band, generally a strip of linoleum called a "cottle," pouring in plaster of Paris which has been mixed with water and well blended into the space between the "cottle" and the clay model. When the plaster has set, which is in about three minutes, the "cottle" is removed and the outside of the mould trimmed, the clay model being removed after the plaster has set hard. From this mould a plaster model is made by pouring plaster into it—this is called the "case"—and from it any number of "working moulds" can be made.

The "saucer" model is treated in the same way, so also the "foot" model if the cup is a fancy shaped one—and lastly the handle, of which a separate mould is made.

PROCESSES OF POTTERY MAKING

Therefore, an ordinary cup and saucer—the cup having a foot on it—requires four moulds to produce it—and the maker requires a set of moulds numbering 40 dozen to enable him to go right ahead without having to wait while his work is drying.

This means, to ensure one day's output for 4 benches 1,584 moulds and 4 makers with 4 attendants are needed to produce in bulk quantity commercially the ordinary teacup and saucer you require for daily use.

Are you not surprised that the cup and saucer as you have it is so marvellously cheap?

Jollyng. A process of making which can be described as a more or less mechanical "thrower," but hand work is



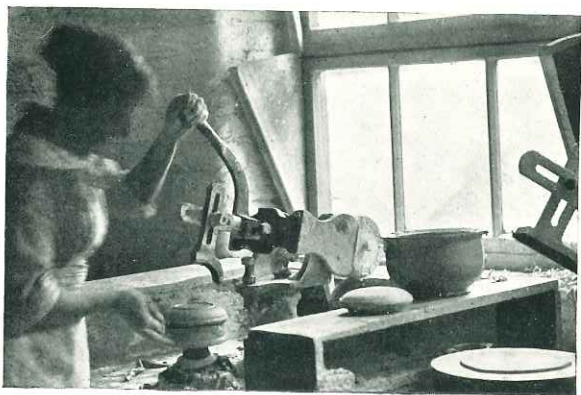
The "Jolly" Machine—Cup Making

still partially used. The "Jolly" is the mould of plaster of Paris which is placed on the "head" (a revolving cup), and into which is put a ball of soft clay, sufficient to make the article. The maker spreads the clay to the sides of the mould while it is revolving, and then brings down a profile on a lever which exactly fits the inside of the mould, leaving just

A WEDGWOOD HANDBOOK

the thickness required of clay between the profile and the mould to make the piece. The mould gives the outside line of the piece—the profile the inside line.

Flat ware, plates, saucers and the like are made upon the same machine—a hump mould giving the upper surface. On this a pancake-like piece of clay is placed—and worked



The "Jigger"—Saucer making

to the shape by the hand—the lever with profile being brought down to form the underside of the piece. Flat ware is always made upside down, that is, the top side of the plate to the mould, the bottom side to the maker.

After making, the mould with the clay upon it is taken to the drying chamber. When partially dry the piece shrinks away from the mould and can be lifted out to be finished by the addition of handle if a cup, and the edge trimmed. A Plate is finished when quite dry with a flannel pad on the surface and a piece of fine sand paper on the edge while it revolves on a horizontal wheel.

Pressing. The making of all oval or square pieces of ware and also much round ware that is decorated with embossed ornament, such as fluting and leafage, is done by placing bats of soft clay beaten out to the required thickness, into a plaster of Paris mould.

The mould is always in two pieces, sometimes in a great many. Each piece of the mould is filled with clay separately,

PROCESSES OF POTTERY MAKING



The Dish Maker

and then the pieces are put together, and the joints made good. The mould when filled is placed in the drying chamber, and when the clay has shrunk away because of the evaporation of some of the water, the pieces of the mould are taken away,

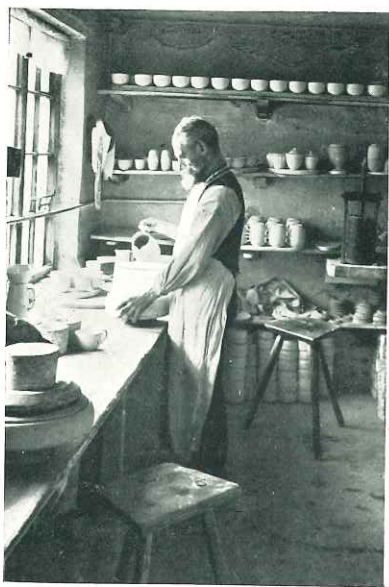


"Pressing" a Jug

A WEDGWOOD HANDBOOK

and the clay piece removed, to be "fettled" and finished by the addition of other pieces, such as a foot, handles, cover, etc., which have been made in a similar manner.

Casting. Still another method of making ware is by pouring liquid slip into a dry plaster mould which immediately begins to absorb the moisture from the slip. This is allowed to go on until a sufficient thickness of clay has adhered to the inside of the mould, when the remainder of the liquid slip



"Casting" Ware

is poured out again, and the mould set to dry, when the piece can be taken out. It is finished in the same manner as the pressed pieces.

These processes are very similar, both in the making of Earthenware and China.

When the clay piece is "white hard"—that is when it is quite dry and chalk white—it is ready for the first fire or "Biscuit" Oven.

PROCESSES OF POTTERY MAKING



The Oven

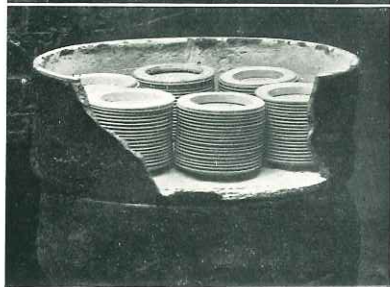
The oven is a circular furnace with six, eight or twelve fire holes at its circumference. These fire holes lead upwards inside to the domed roof, and downwards through channels under the floor to a hole in the centre, so that during firing the whole of the oven is evenly heated. Firing continues from 30 to 90 hours, according to the heat required, and the class of ware that is being fired.

When "setting in" or "placing" an oven, fireclay boxes called "saggars" are used (a corruption of the word safeguard—the saggar is to safeguard the ware from dirt, etc., during the firing). These are filled with different clay pieces, and built one upon another in "bungs" or columns, from the floor to the top of the oven—when completely full the entrance to the oven is closed up with fire bricks and the fires lighted and maintained until the maximum heat is arrived at, which

A WEDGWOOD HANDBOOK



Cups "Placed"
ready for
Bisque Oven



Saucers "Placed"
ready for
Bisque Oven

is tested at intervals by the "Fireman," who draws from "proof holes" left open at four sides of the oven—proofs or tests, with an iron rod. The cooling of the oven takes generally about as long as the firing, and when cool enough the entrance is opened and the saggars are taken out one by one, emptied, and their contents taken to the Sorting Warehouse.

In the "**Biscuit**" Oven the clay ware can touch as there is nothing to fuse or melt, or make it stick together during firing. It is "placed" together, therefore, with only sand or powdered flint in between the pieces.

In the **Biscuit Sorting Warehouse** all the ware is carefully looked over—flaws of all sorts are detected, and only the good ware—(that free from specks, fire cracks, and warping), is sent forward to the Dipping House.

Printing is a process much used in underglaze decoration. A copper plate receives the pattern engraved upon it.

PROCESSES OF POTTERY MAKING



The Printer

The Printer fills the lines of the engraving with color mixed with oil, by rubbing it well in with a wooden muller, removing as much as he can with a palette knife and bosses off the remainder with a cloth boss—so that color only remains in the lines of the pattern. He then takes a thin tissue paper which has been prepared with a water size and places it upon the copper plate, passing the whole under the roller press. The tissue is then pulled off the copper plate bringing with it the color out of the lines of the pattern. This tissue is then transferred upon the piece of ware and well rubbed on, the oil making it adhere thoroughly—the next thing is to get rid of the paper which has transferred the color from the copper plate to the ware. By plunging the piece of ware into a tub of water the size and paper are affected and wash away easily leaving the oil color unaffected.

The ware thus printed and transferred is next passed to the “hardening on” kiln—a low red heat only, which drives off the oil and fixes on the color. When the ware is drawn from this kiln it is ready for the dipper, and the pattern now having lost its oil does not reject the water glaze, so the piece receives an even coat of it all over, and is “placed” in the glost oven for firing, coming out after with the pattern right under the glaze.

A WEDGWOOD HANDBOOK



The Transferrer

Underglaze Patterns. Upon the ware in the Biscuit state a design can be painted by hand and very rich effects can be produced, but the palette of colors is somewhat restricted as the high temperature of the Glost Oven will not allow the more delicate and brighter tints to be used. These mixings will only develop at the lower heat of the Enamel Kiln—but Blues, Browns, Yellows and Greens in limited range will stand the greater temperatures, and also a pink and red of low tone.



Underglaze freehand painted patterns

PROCESSES OF POTTERY MAKING

In the **Dipping House** the dipper has in front of him a tub full of glaze in liquid form (that is, the materials to make the glass or glaze, when fired—these are prepared in the mill in a similar manner to the preparation of the clay—except that they only proceed as far as slip or slop stage. This is the slop in the dipper's tub, and he takes a piece of biscuit ware—which is porous—and immerses it into the slop—the biscuit piece sucks at once a portion of the water, leaving the solid parts as a thin coating like whitewash all over it. When fired this becomes fused, and is a transparent glass or glaze covering the whole piece.



The Dipper

Glost Oven. After dipping, the ware is "placed" in a "saggar" which has already been glazed inside and fired, each piece has to be kept apart from the other, and also from the sides and bottom of the saggar, this is done by putting specially made pieces of "biscuit" ware, called "stilts," "saddles," "thimbles," "cockspurs" having very fine points which touch the ware in just sufficient places to support it and keep it apart. If you examine closely a plate, you will

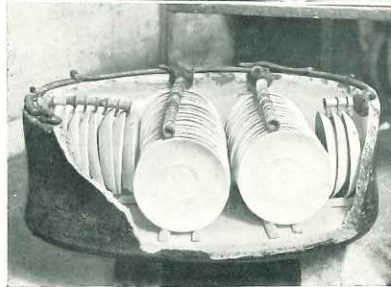
A WEDGWOOD HANDBOOK

find two small marks on the edge, about 3 inches apart, and one mark on the opposite side between the two, but at the back of the plate. Sometimes the mark will take the form of three minute spots on the back of the piece in the form of a triangle. These are necessary, and tell the way in which the piece has been placed in the saggar.

The oven is fired and the glaze developed ; when cooled the pieces are "drawn" from the saggars and sent to the Glost Warehouse, where another sorting takes place, the imperfect pieces being rejected.



Cups "Placed"
ready for
Glost Oven



Saucers
"Placed" ready
for Glost Oven

Overglaze Patterns are applied by painting or printing as described before, the palette of colors covering a much wider range. The pattern being fired only at a bright red heat is fixed to, but on the top of, the glaze.

PROCESSES OF POTTERY MAKING



Glost Placers at Work



The Enamel Kiln

Gold—whether the best metallic gold or liquid gold (which is an alloy merely)—is placed upon the top of the glaze and fired in the kiln. In the case of the best gold it comes out

A WEDGWOOD HANDBOOK

dull, and requires "sanding" or scouring (rubbing with fine silver sand) to give a dull surface—or burnishing with an agate, bloodstone or hard steel tool to make it bright. Liquid gold comes from the kiln fire already bright and needs no further treatment.



Gold Burnishers at Work

Acid Gold. This process is carried out by painting or printing the pattern with a "resist" pigment upon the glazed ware—and all the plain parts of the piece which are not to be acted upon by the acid are similarly treated.

The piece of ware is then immersed in a bath of Fluoric Acid, which eats away the parts of the glaze exposed (not protected by the "resist"). When the "biting" action has gone as far as desired the ware is removed from the bath and the "resist" washed away, leaving the pattern bright upon a dull surface. This is covered with best metallic gold and fired in the kiln. When "drawn" it is scoured or burnished, and the pattern appears in bright gold in slight relief upon a dull or matt gold ground.

PROCESSES OF POTTERY MAKING

Groundlaying is a process which gives a very even texture of color of regular strength all over, and is produced by this means :—An even coating of very sticky oil is put upon the piece of ware by means of a dabbing process with a fine silk boss. When this is complete the color in fine powder is dusted over this oil surface with a piece of cotton wool, and the oil is allowed to absorb as much dust as it will. Of course the parts of the ware not treated with oil do not receive the dusted color. The firing drives off the oil and leaves only the color on the ware firmly fixed to the glaze by the proportion of flux in the color that has to be put into all overglaze colors for this purpose.

The polishing smooth of the little “placing” marks is the final process before the piece is ready for the packing house and despatch to the retailer.

JOSIAH WEDGWOOD & SONS, LTD.

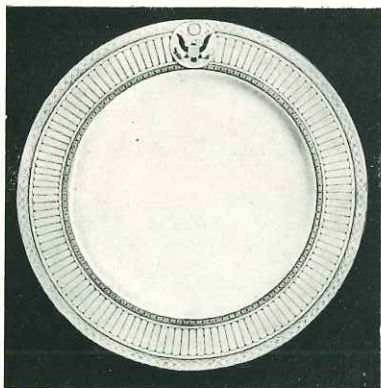
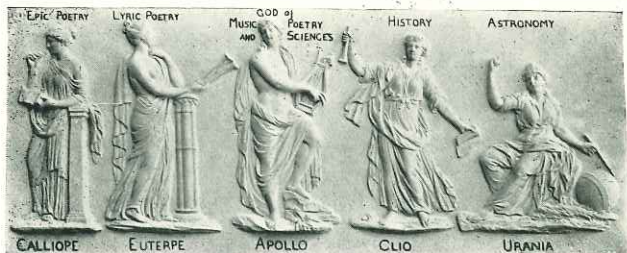


Plate from the China Service 1296 pieces,
made for President Roosevelt, U.S.A.

APOLLO AND THE MUSES



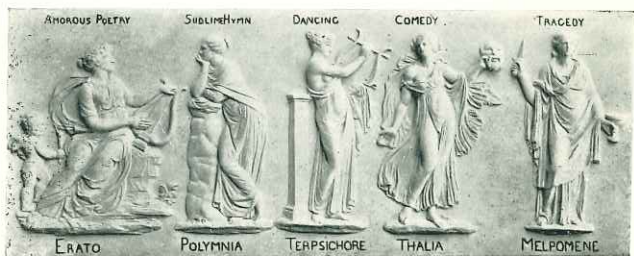
Apollo, one of the great divinities of Greece. He was the son of Zeus, especially the god of prophecy, the one who sent plagues, and in many places was worshipped as the god of light, therefore the god who brings back sunshine and the light of Spring.

He was the god of oracles, the mouthpiece of Zeus, the founder of States, and leader of the Colonies, and his oracle sanctioned the enterprise of the colonists.

He was the ideal of manly beauty, hence a patron of athletics, and protector of flocks and shepherds.

He is generally represented as a beardless youth, as the archer god, slayer of the dragon ; but as god of music he is clothed in a long tunic, and holds a lyre.

The Muses were the goddesses of song, divinities presiding over the different kinds of poetry, and the Arts and Sciences. They were honoured from the earliest times with Choruses and Dances, and were brought into connection with Apollo because he was the god of prophetic and poetical inspiration.



US PATENT & TRADEMARK OFFICE



3 0402 00275 1388





**RETURN TO
DESIGN DIV.**